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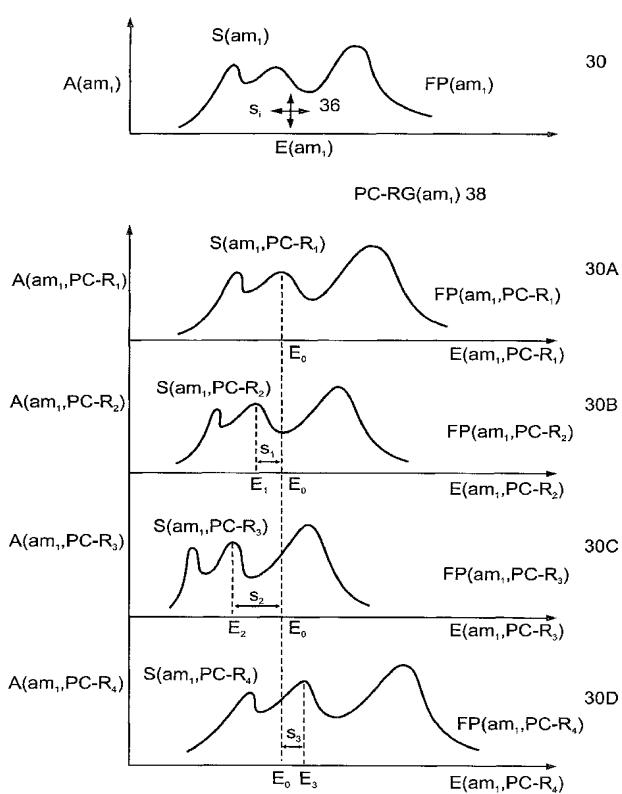
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[Continued on next page]

(54) Title: AUTHENTICATING AN AUTHENTIC ARTICLE USING SPECTRAL IMAGING AND ANALYSIS



(57) Abstract: Authenticating an authentic article having an authentication mark. Acquiring a set of spectral images of the authentication mark, for forming a set of single-authentication mark spectral fingerprint data (FIG. 1). Identifying at least one spectral shift in the set of single-authentication mark spectral fingerprint data, for forming an intra-authentication mark physicochemical region group including sub-sets of intra-authentication mark spectral fingerprint pattern data, such that data elements in each sub-set are shifted relative to corresponding data elements in remaining sub-sets in the same intra-authentication mark physicochemical region group (FIG. 2). Forming a set of intra-authentication mark physicochemical properties and characteristics data relating to the imaged authentication mark, by performing pattern recognition and classification analysis on the intra-authentication mark physicochemical region group (FIG. 3). Comparing and matching elements in the set of intra-authentication mark physicochemical properties and characteristics data to corresponding reference elements in reference set of data, thereby authenticating the authentic article.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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